

AMENDMENTS TO THE CLAIMS

Below is the entire set of pending claims pursuant to 37 C.F.R. §1.121(c)(3)(i), with any mark-ups showing the changes made by the present Amendment.

1-8. (Canceled)

9. (Currently amended) A data storage and retrieval system, comprising:

a data processing server configured to receive incoming data and to transmit the data for storage;

a plurality of data storage servers each coupled to one or more data storage units and configured to receive transmitted data for writing to the one or more data storage units, and configured to read data from the one or more data storage units;

a data retrieval server coupled to one or more of the plurality of data storage servers and configured to retrieve data read by the one or more data storage servers from the one or more data storage units; and

a plurality of process modules each associated with one of the plurality of data storage servers, at least two of the process modules each configured to write a portion of the data to a corresponding data storage unit, each of the at least two process modules further configured to transmit an acknowledgment associated with the corresponding data storage unit upon the writing of the portion of data in the corresponding data storage unit,

wherein a first of the at least two data storage servers associated with a first data storage unit is coupled to a second data storage server associated with a second data storage unit, and wherein the process module in the first data storage server is configured to transmit an acknowledgment associated with each of the first and second data storage servers in response to:

(i) receiving an acknowledgment from the process module in the second data storage server based on the writing of the data portion in the second data storage unit, and

(ii) the writing of the data portion in the first data storage unit.

10. (Previously presented) A data storage and retrieval system according to claim 9, wherein the process module associated with the first data storage server is configured to transmit an acknowledgment from each of the at least two data storage servers to the data processing server.

11-13. (Canceled)

14. (Currently amended) A data storage and retrieval system, comprising:
a data processing server configured to receive incoming data and to transmit the data for storage;

a plurality of data storage servers each coupled to one or more data storage units and configured to receive transmitted data for writing to the one or more data storage units, and configured to read data from the one or more data storage units;

a data retrieval server coupled to one or more of the plurality of data storage servers and configured to retrieve data read by the one or more data storage servers from the one or more data storage units; and

a plurality of process modules each associated with one of the plurality of data storage servers, at least two of the process modules each configured to write a portion of the data to a corresponding data storage unit, each of the at least two process modules further configured to transmit an acknowledgment associated with the corresponding data storage unit upon the

writing of the portion of data in the corresponding data storage unit,

wherein at least two of the plurality of data storage servers comprise a first group of data storage servers coupled to corresponding data storage units and at least two others of the plurality of data storage servers comprise a second group of data storage servers coupled to corresponding data storage units, and wherein each of the plurality of process modules is further configured to transmit an acknowledgment associated with corresponding data storage servers of the second group in response to the writing of the data portion to the data storage units associated with the second group of data storage servers regardless if when the data portion is not-written to the data storage units associated with data storage servers of the first group.

15-21. (Canceled)

22. (Canceled)

23-26. (Canceled)

27. (Currently amended) A method for storing and retrieving data, comprising:
receiving incoming data and transmitting the data for storage using a plurality of data storage servers;

writing a portion of the data in at least two data storage units, one or more of the at least two data storage units coupled to corresponding ones of the plurality of data storage servers;

transmitting an acknowledgment associated with each of the at least two data storage units upon the writing of the data portion in the at least two data storage units; and

retrieving the data portion from one or more of the at least two data storage units,

wherein transmitting an acknowledgment associated with each of the at least two data storage units further comprises transmitting the acknowledgements from a first process module in a first of the plurality of data storage servers in response to:

- (i) receiving an acknowledgment from a second process module in a second of the plurality of data storage servers coupled to the first of the plurality of data storage servers, and based on the writing of the data portion in a second of the at least two data storage units, and
- (ii) writing the data portion in a first of the at least two data storage units.

28-30. (Canceled)

31. (Currently amended) A method for storing and retrieving data, comprising:
providing a plurality of data storage servers each coupled to one or more data storage units;

receiving incoming data and transmitting the data for storage in the data storage units using the plurality of data storage servers;

writing a portion of the data in at least two data storage units coupled to data storage servers comprising a first group, while not writing the portion of data in at least two other data storage units coupled to other data storages servers comprising a second group;

transmitting an acknowledgment associated with each of the at least two data storage units of the first group upon the writing of the data portion in each of the at least two data storage units of the first group, and upon the non-writing of the portion of data in the at least two data storage units of the second group; and

retrieving the data portion from one or more of the at least two data storage units of the first group;

~~wherein transmitting an acknowledgment comprises transmitting an acknowledgement associated with each of the at least two data storage units upon the writing of the data portion in the at least two data storage units when the data portion is not written to at least two other data storage units.~~

32-55. (Canceled)

56. (Currently amended) A data storage and retrieval system comprising:

a data processing server configured to receive incoming data and to transmit the data for storage;

a plurality of data storage servers each coupled to one or more of a plurality of data storage units and configured to receive a portion of the data for writing to at least two of the data storage units;

a data retrieval server coupled to one or more of the plurality of data storage servers and configured to retrieve the data portion ~~received~~ read by the one or more data storage servers and written to the at least two data storage units from one or more of the at least two data storage units;

data storage information keys corresponding to each of the data storage units and comprising offset information corresponding to the location of the data portion in the at least two data storage units; and

a key manager associated with the data retrieval server and configured to store the data storage information keys therein,

wherein the data storage information keys further comprise deletion information

corresponding to a date on which the data portion written to the at least two data storage units is deleted.

57. (Previously presented) A data storage and retrieval system according to claim 56, wherein the data processing server is further configured to generate the deletion information.

58. (Previously presented) A data storage and retrieval system according to claim 56, wherein the data storage units are configured to delete the data portion on a predetermined date corresponding to the deletion information.

59-65. (Canceled)

66. (Previously presented) A method for storing and retrieving data, comprising:
receiving incoming data and transmitting the data for storage;
writing a portion of the data in at least two data storage units;
creating data storage information keys corresponding to each of the at least two data storage units and comprising offset information corresponding to the location of the data portion in the at least two data storage units;
storing the data storage information keys in a key manager; and
retrieving the data portion from one or more of the at least two data storage units,
wherein the data storage information keys further comprise deletion information corresponding to a date on which the data portion written to the at least two data storage units is deleted.

67. (Previously presented) A method according to claim 66, further comprising deleting the stored data portion from the at least two data storage units on the date corresponding to the deletion information.

68. (Currently amended) A method for storing and retrieving data, comprising:
providing a plurality of data storage servers each coupled to one or more data storage units;

receiving incoming data and transmitting the data for storage in the data storage units using the plurality of data storage servers;

writing a portion of the data in at least two data storage units coupled to distinct ones of the plurality of data storage servers;

creating data storage information keys corresponding to each of the at least two data storage units and to the distinct ones of the plurality of data storage servers corresponding to the at least two data storage units, the storage information keys comprising storage server information identifying the distinct ones of the plurality of data storage servers corresponding to the at least two data storage units, and offset information corresponding to the location of the data portion in the at least two data storage units;

storing the data storage information keys in a key manager; and

retrieving the data portion from one or more of the at least two data storage units,

wherein retrieving the data portion further comprises identifying the distinct ones of the plurality of data storage servers, and locating the data portion in one or more of the at least two data storage units using at least one of the data storage information keys, and retrieving the located data portion.

69-71. (Canceled)